



Brand Compas

LIBRARY

General Collections

P

2991



22502853187

RECENT
BIOCHEMICAL
INVESTIGATIONS
UPON
BRAND'S
ESSENCES.

Foreword

BRAND'S ESSENCES OF BEEF AND CHICKEN have been manufactured in London for the past 80 years, and have been regularly prescribed by the Medical Profession throughout that period by reason of their exceptional properties in the treatment of debility and gastric disorder.

It was felt, however, that not enough was known of their properties and the nature of their effect on the gastro-intestinal canal, and only recently has research work—carried out at one of the big London Hospitals—thrown light on the mechanism of their digestion, and helped to elucidate their remarkable restorative and stimulating powers.

In the following pages are set out some interesting facts brought to light in the aforesaid investigation, together with a short description of some of the other invalid foods manufactured under ideal conditions by Brand & Co., at Vauxhall.

Authorities are agreed that although the chemical analysis of a food is valuable, it does not furnish all the information necessary for the dietetist's use. Such facts as the time taken for digestion, the acidity produced, and an analysis of the disintegration products of the ingested protein do not usually appear in proprietary literature, but it was felt that such information was essential in the light of modern clinical knowledge.

With the above aim in view, the aid of an English biochemist of international repute was enlisted, and it was decided to perform a detailed examination into firstly, the gastric stimulation caused by the Essences, and secondly, the actual changes undergone by the protein during its passage through the stomach. By this means valuable information should be obtained which could be regarded in the nature of a guide for the use of practitioners in prescribing a suitable diet in illness and convalescence.



RETAIL PRICES.

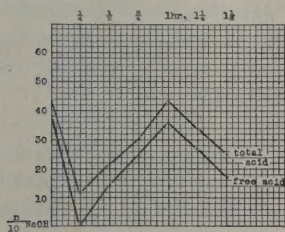
BRAND'S INVALID FOODS.

						Tins.	Bottles.
Essence of Beef	...	...	...	...	...	2/6	2/9
Essence of Chicken	...	...	...	...	...	2/9	3/-
Meat Juice	...	...	...	...	...		Per bottle. 3/9
						Small bottle.	Medium bottle.
Peptamalt	...	...	...	...	2/6	5/-	9/-
Real Calf's Foot Jelly	}					10 oz. bottle.	20 oz. bottle.
Plain, Orange, Lemon,		...	...	...	1/4	2/4	
Unsweetened		...					
Wine flavours	...	...	...	...	...	1/6	2/9
Invalid Soups—Chicken Broth	...	...					
Mutton Broth	...	...					
Veal Broth	...	...					
Mock Turtle (thick or clear)	}					½ pt. tins.	½ pt. bottles.
Oxtail (thick or clear)						1/-	1/4
Gravy		...	...	...			
Beef Tea, clear		...	...	...			
Beef Tea, fibrous	...	...	...	...			
						¼ pt. bottles.	½ pt. bottles.
Real Turtle Soup	...	...	...		1/2	1/9	3/3
Beef Tea Jelly	...					5 oz. bottles.	10 oz. bottles.
Chicken Jelly	...		...	...	...	1/3	2/-
Real Turtle Jelly	...						

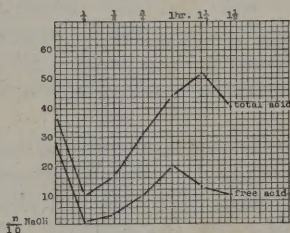
GASTRIC STIMULATION.

It was decided that the best results would be obtained by following the Fractional Testmeal Method, as described by Rehfuß. This method is described in all the text-books, and it is too well-known to be repeated here. It is sufficient to say that the gastric contents are withdrawn every 15 minutes after giving the testmeal, and the specimens so obtained are analysed for their various constituents.

In the first part of the investigation, human gastric juice, which was produced by the ingestion of Brand's Essence, was analysed, and the free and total acidity tested. As a standard of comparison a similar investigation was made upon a number of persons, using one pint of gruel as a testmeal. The curves illustrate quite lucidly the points of dissimilarity in the two cases.



Gastric stimulation after the ingestion of 1 pint of gruel.



Gastric stimulation after the ingestion of Brand's Essence.

Taking first of all the average curve for a normal individual after the ingestion of gruel, it will be seen that the production of absorbed acid is fairly high, and it is followed very closely by the curve for the free acidity. This is entirely what would be expected in a normal stomach. Referring to the other graph, however, it will be seen that the free acid curve lags behind that of the total acidity very considerably, in spite of the fact that the latter rises to an exceptionally high degree. This was found to be the case throughout a series of experiments on a number of normal men, and one is forced to the conclusion that the protein content of Brand's Essence exerts a considerable influence on the absorption of the free acid.

It would appear, therefore, that the protein is a very important factor, in that whilst it calls forth the secretion of acid, it is also capable of absorbing it to a considerable extent, thereby preventing the acidity from rising to too great a height and causing damage to places of ulceration in the stomach or duodenum.

In this connection it is interesting to note that the standard treatment for gastric ulcer is the administration of an alkaline diet, to counteract the effects of excess free acid.

It is a significant fact also, that although the analysis of ordinary meat extract gives a high protein value, when diluted for consumption the available protein is quite insufficient to absorb the free acid to any noticeable extent.

Further investigations *in vitro* fully bear out the above results, and it was noted that by first precipitating the protein in Brand's Essence, a very similar curve was obtained to that of gruel or ordinary meat extracts.

THE EFFECT OF GASTRIC JUICE UPON BRAND'S ESSENCE.

Having found the effect of Brand's Essence on the stimulation of gastric juice the actual stages in digestion were studied. As is well-known, the addition of acid to most protein solutions at once causes a precipitate due to coagulation of the protein. Such coagulated proteins have then again to go into solution in the form of an acid, which process must take a considerable time.

This phenomenon, however, was not observed when pure gastric juice, which had been obtained from the human stomach following subcutaneous injection of Histamine, was mixed intimately with

Brand's Essence. Digestion proceeds rapidly and uneventfully to the peptone stage without any retarding effect such as that produced when protein is precipitated from solution.

It seems reasonable to assume from this experiment that owing to the perfect state of solution of the protein matter, and consequently the large surface presented to the action of the gastric enzymes, Brand's Essence is already in a perfect state for the action of the digestive ferments.

DIGESTION TO THE PEPTONE STAGE.

It is possible further to observe the later stages of digestion by a method which is far too complicated and elaborate to describe here. This method enables the proteose and peptone fraction to be estimated after digestion, and it was shown that Brand's Essence proceeded to this stage with great rapidity, being totally assimilated three times as quickly as would be the case with ordinary protein in meat.

The importance of this lies in the fact that even though the quantity of gastric juice and its associated ferments may be low in the stomach, due to disease, there would always be sufficient present to digest the highly soluble form of protein present in the Essence.

SUMMARY.

It can be seen that four main conclusions have been reached by the application of the Fractional Testmeal Method of gastric analysis :

- (1) Brand's Essence causes a free and potent secretion of gastric juice.
- (2) The protein content of Brand's Essence has a marked effect in absorbing the free acid produced.
- (3) Brand's Essence retains its perfectly soluble form through each stage of digestion and at no stage is any precipitate formed.
- (4) That even in the event of gastric insufficiency, due to disease, there would always be sufficient of the digestive ferments present to deal with the highly soluble form of protein present in the Essence.

We venture to think that these four facts should prove of definite interest to the Physician in enabling him to prescribe Brand's Essence with the most perfect confidence in all cases of debility, gastric insufficiency or derangement, with the knowledge that the soothing and tonic effects of the Essence can only bring about a return to a normal healthy condition of the organism.

INDICATIONS.

DEBILITY or Gastric derangement.

EXHAUSTION. It has proved especially useful during the crises in influenza and pneumonia, when it can be retained and enjoyed when all other forms of nourishment are repugnant.

GASTRIC AND DUODENAL ULCER. As mentioned before, Brand's Essence, while promoting full gastric secretion, has the property of absorbing a considerable quantity of the free acid formed, thus preventing irritation to places of ulceration in the stomach.

FEVERS. When food must be light and no solid residue may be formed in the stomach.

It has often been remarked that Brand's Essence greatly relieves the symptoms of prolonged physical effort and hunger. It is instructive to note that it is beneficial to athletes or other persons subjected to prolonged mental or physical strain.



BRAND'S ESSENCES OF BEEF AND CHICKEN.

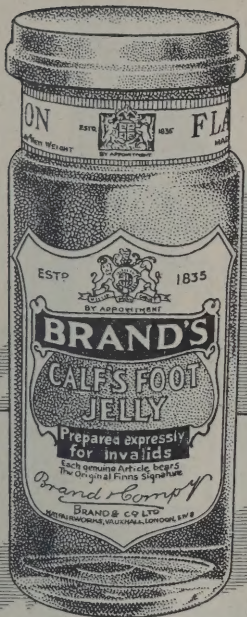
These well-known Essences are prepared by a process which ensures that the protein is present in the correct proportions, and in its most assimilable form. They produce a copious secretion of gastric juice and can be entirely digested even when gastric secretion is low due to disease. It might be mentioned that there is no major difference in the constitution of Beef and Chicken Essence. One or the other may be preferred, according to the patient's inclination. Brand's Essence is sterilized by heat and no preservative is used during its manufacture, for this reason, it is advisable to consume it within two days of opening. A plan adopted by many is to place the Essence, when the container has been opened, in a saucer of cold water beneath an inverted tumbler. This keeps the Essence cool and enables it to remain sterile for a longer period.



BRAND'S MEAT JUICE.

Many preparations are loosely termed Meat Juice even though they are heavily charged with meat extract or blood, but to conform to the strict definition, a true Meat Juice should only contain the pure juice of freshly killed Beef concentrated by a suitable method.

Brand's Meat Juice is made by expressing the juice from freshly killed English Beef and concentrating it in vacuo to suitable consistency. This method has the advantage of retaining the albumen and vitamins found in fresh animal tissue, thus producing a preparation which has definite nutritive value. The stimulating and sustaining properties of Raw Meat Juice are well-known, and Brand's Meat Juice combines all these natural advantages in a palatable and economic form.



BRAND'S MEAT JELLIES.

As a variant to the ordinary invalid diet consisting of Milk Foods or Beef Tea, these delightfully flavoured Meat Jellies are often appreciated by the patient. Our Real Calf's Foot Jellies are prepared in a number of natural flavours, only pure fruit juices or wine being added for flavouring purposes.

Real Turtle Jelly is prepared from fresh red Turtle Meat from turtles which are imported alive from the West Indies. Sugar is added, which makes this delicacy especially palatable for children. As is well-known, Turtle Meat contains combined phosphorous, and is, therefore, a useful medium for administering small quantities of this element.

BRAND'S PEPTAMALT.

As the name implies, this is a peptonised beef and barley malt preparation in which the original protein has been broken down into its soluble components. It is superior to foods which have been treated with peptonising powders as the beef is completely reduced to a liquid state. Keeping qualities are well assured by modern sterilisation methods as with all Brand's Invalid preparations, and a little sherry is added to improve palatability.

Peptomalt has been found valuable as a preventive of sickness of various kinds, especially post-operative and morning sickness. Many reports have been received of its value in allaying the distressing symptoms of sea-sickness.





BRAND'S INVALID SOUPS.

The recommendation of a palatable invalid diet is rendered difficult owing to the limited number of foods which fulfil the conditions of lightness and digestibility. Brand's Invalid Soups solve this difficulty, and provide a useful addition to the list of foods which can be calculated to interest and attract the patient.

Chicken, Mutton, or Veal Broth are suitable for the early stages of convalescence, while a change can be made later to Mock Turtle and Oxtail Soup, either in thick or clear form.

